

CIO

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CIOs are **earning** more business credibility, **sharpening** customer focus and **raising** IT's strategic profile, according to our **2013 State of the CIO Survey** 32

BY KIM S. NASH

Take your big ideas
off the back burner
with HP Converged Infrastructure
powered by Intel®

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page



Roy Cahn-Speyer

HP PRODUCT MARKETING
MANAGER FOR THE AMERICAS,
HEWLETT-PACKARD CO.

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and two-socket server busi-
ness for the Americas. He
is responsible for product

launches, market development, and transition planning.

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What will the typical two-socket server look like in five years?

The industry is trending toward a server with 64 cores, 4TB to 8TB of memory and two 100Gbit network ports. We think it will be capable of hosting 300 to 500 virtual machines.

That sounds like a very large server. But what would happen if it were to crash?

Not a pretty picture. That's why at HP, we've started three multiyear projects to address the server of the future. *Project Moonshot* leverages hundreds of low-power processors, like the ones in cell phones, each running its own copy of Linux for applications like Web hosting or Hadoop. *Project Odyssey* aims to improve server reliability and fault toler-

uptime, simplify server management and decrease total cost of ownership. These goals are met by the ProLiant Gen8 servers, which feature a new version of the HP's Integrated Lights-Out processor (iLO 4). iLO 4 delivers a complete set of intelligent, automated management features for self-analysis and healing, from initial deployment to daily management, service alerting and remote support. On the performance and value side, AMD Opteron 6200 Series processors offer the industry's highest core density and the exceptional price/performance that AMD is known for.

Can you explain how iLO 4 delivers a smarter and more automated server?

iLO 4 is like a computer inside each ProLiant Gen8 server. It is connected to

and drivers, HP offers the free Smart Update application that automatically sequences every step in the correct order and requires a maximum of one reboot, which takes the risk out of firmware and driver updates.

How is the performance running compute-intensive workloads?

The AMD Opteron 6200 Series processors deliver a major boost in price/performance. Available with 4-, 8-, 12- or 16-core AMD processors, the ProLiant Gen8 servers feature the highest core density. Twice the cores per server lets you host virtual machines with a dedicated core for each VM. It also lets you serve more database users and solve more complex HPC problems. The Gen8 server design with AMD Opteron 6200 Series processors balances flexibility, expandability and energy efficiency.

What advice would you offer CIOs looking to future-proof their server infrastructure? When you're counting on a server farm to power your business, you want a smarter server with intelligence close to the application. This will enable you to automate manual operations, lower operating costs and increase uptime. Moving in this direction is a journey. We believe the ProLiant Gen8 server with AMD is an excellent place to start.

When you're counting on a server farm to power your business, you want a smarter server with intelligence close to the application.

ance by adapting technology from our NonStop and Business Critical Systems Group to Windows and Linux. And *Project Voyager*, which adds intelligence to our servers, helping to increase uptime, automate server management and reduce the need for staff intervention. In fact, the HP ProLiant Gen8 blade, tower and rack-mount servers, launched in March, are the first deliverables of Project Voyager.

How do these smarter servers powered by AMD Opteron™ 6200 Series processors meet the business needs of CIOs today?

IT managers need to increase server

all server subsystems and has a 4GB flash memory. iLO 4 enables agentless phone home functionality, which makes remote management painless. HP will even help you manage your servers via our free cloud-based Insight Online portal hosted on hp.com. In addition, the new Active Health System continually monitors and logs 1600 parameters to the 4GB flash memory so even the trickiest problems can be root-caused up to five times faster. We also made initial deployment easier by eliminating the need for CDs. Drivers and firmware needed to install an operating system are now embedded in iLO 4. When it comes time to update firmware

FOR MORE INFORMATION:

visit www.hp.com/go/gen8bladeserver2



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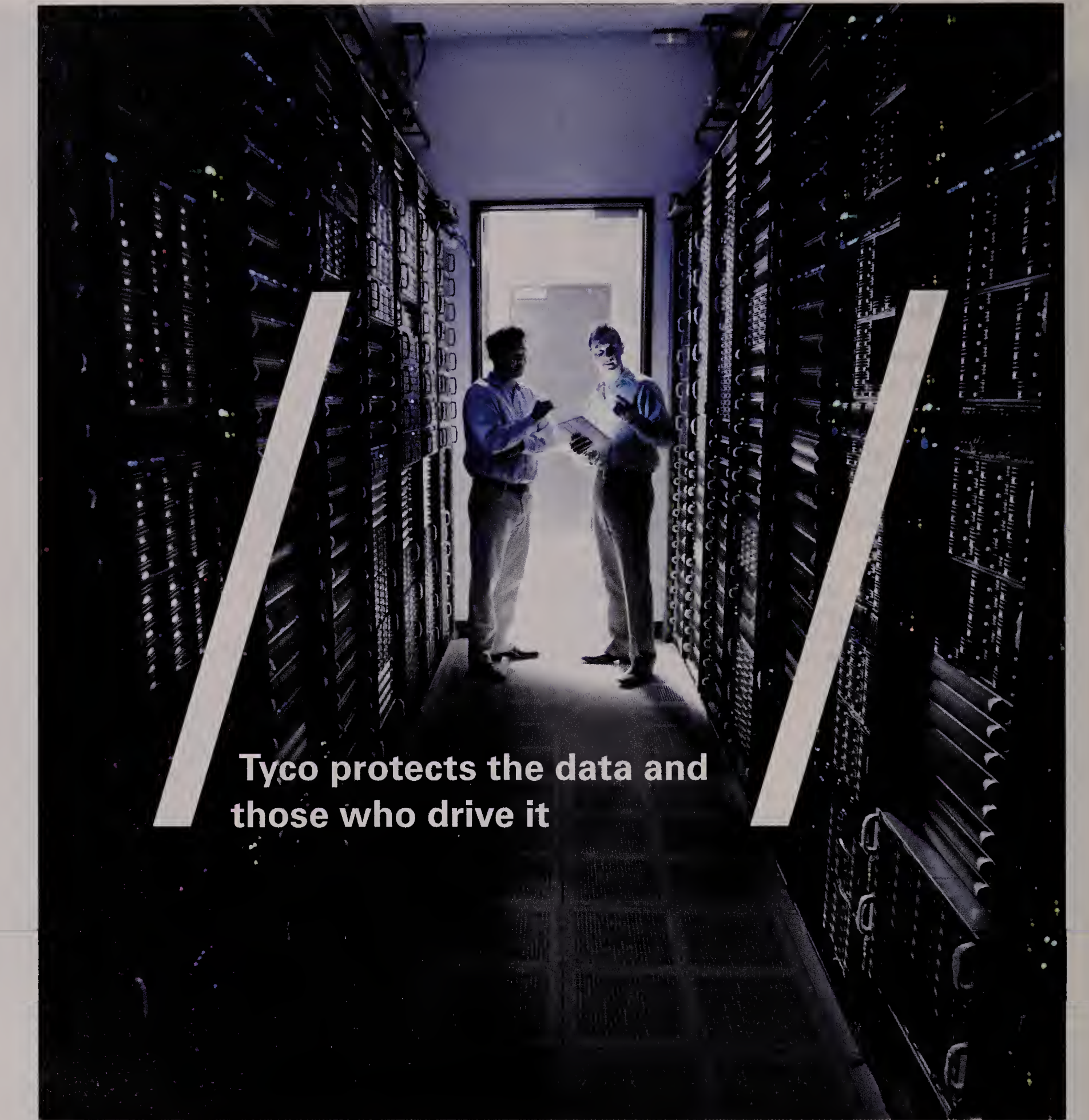


*Substantiation: IDC white paper sponsored by HP, *Measuring the Business Value of Converged Infrastructure in the Data Center*, October 2011

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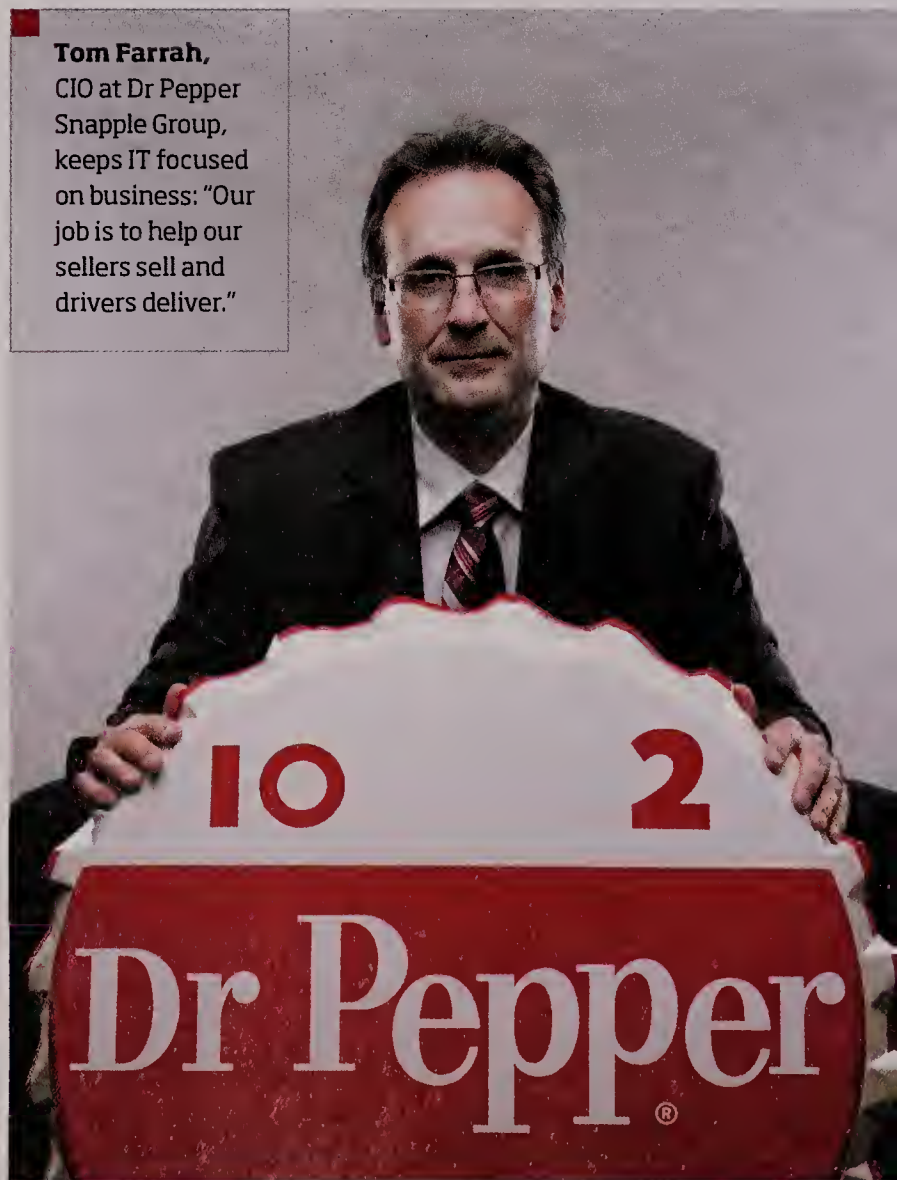
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COVER STORY CIOs are earning more business credibility, sharpening their customer focus and raising IT's strategic profile, according to our **2013 State of the CIO Survey**

BY KIM S. NASH

Tom Farrah,
 CIO at Dr Pepper
 Snapple Group,
 keeps IT focused
 on business: "Our
 job is to help our
 sellers sell and
 drivers deliver."





FROM THE
EDITOR IN CHIEF

start

The People Factor

We start every year at this magazine by taking the pulse of this profession. Our State of the CIO research surveys 500+ CIOs and IT leaders on everything about their jobs, including budgets, business priorities, salaries, job tenure and levels of influence within the C-suite.

For 12 years now, we've been tracking (and cheering on) the arduous but rewarding journey so many of you have made in elevating IT from cost center to business enabler to strategic partner.

In last year's State of the CIO research, for example, we found your strategic influence was improving (a bit) but was still disconnected from competitive business issues. In 2011, with the recession abating, your attention was turned to innovation, staff productivity and business-process efficiency.

It takes a lot of heart to be a great CIO—and a lot of leadership skills to make change happen as relentlessly as it does in a world gone digital. Technology is easy, CIOs will tell you, but people are hard.

Which is why you might be surprised to learn that this year's research shows that CIOs have made a welcome breakthrough in the last place you'd expect: the people factor. The majority of the 563 IT leaders we surveyed are making a concerted effort to market IT value and get their staffers out there, face-to-face with their business peers.

CIOs are elevating their teams' relationship with business people "by delegating more, developing leadership and cross-functional skills among their IT staff, and turning their attention to customers," writes Senior Editor Kim S. Nash in our cover story ("Gaining Stature," Page 32).

At WD-40 Company, VP of IT Bob Hoagland started sending his people to other departments' meetings, which was a little weird for everyone at first. (Why is that IT guy hanging around?) In one of the meetings, an applications manager heard a marketing colleague talking about the agony of juggling data from 175 spreadsheets. The IT staffer whipped up a Web-based application that solved her problem. (Thus delivering the Holy Grail of Marketing: Something you never knew you always wanted.)

"The more people are involved with each other, the more ownership they will take for building relationships," Hoagland wisely observes.

Our story details many other smart moves CIOs are making to raise IT's status as a business partner and a friendly source of innovative ideas. We'd love to hear what you're doing at your company, too. What people factors will you work on in 2013?

Maryfran Johnson, Editor in Chief, CIO Magazine & Events
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CHATTER

Make Up With Millennials

A recent survey shows that most employers would still **hire a mature IT pro over a Millennial**, but companies shouldn't be so quick to pass over these young up-and-comers. Senior Online Writer Rich Hein talked with workforce staffing company Adecco, which surveyed more than 500 hiring managers. The study found that mature workers are less **tech savvy** than Millennials, but younger workers are often less concerned about compensation than **work-life balance** and **meaningful assignments**. To attract Millennials, Hein found, companies must lay out a **clear path to advancement**, offer **flexible work policies** and implement **mentoring programs**. www.cio.com/article/721981

Social Metrics Missing

More companies are investing in social media as a business tool, but **only 19 percent can measure its ROI**, concludes an IBM study of more than 1,100 businesses. Senior Online Writer Kristin Burnham says companies should use pilot projects to show **hard and soft benefits** of social initiatives. It's also important to have social use policies in place to identify potential exposures and develop **risk-management plans**. www.cio.com/article/721574

Big Deals in Big Data

Only a handful of companies have done truly notable **big data deployments**, reports Senior Online Writer Thor Olavsrud. Among them are the National Oceanic and Atmospheric Administration, which manages **30 petabytes of new data** annually, and the IRS, which uses big-data technologies to run analytics that help **predict identify theft** and **estimate the tax gap**. www.cio.com/slideshow/72421

Compiled by Staff Writer Lauren Brousell.
Have a comment about a story in this issue? Go to www.cio.com/issue/20130101 or write to letters@cio.com.

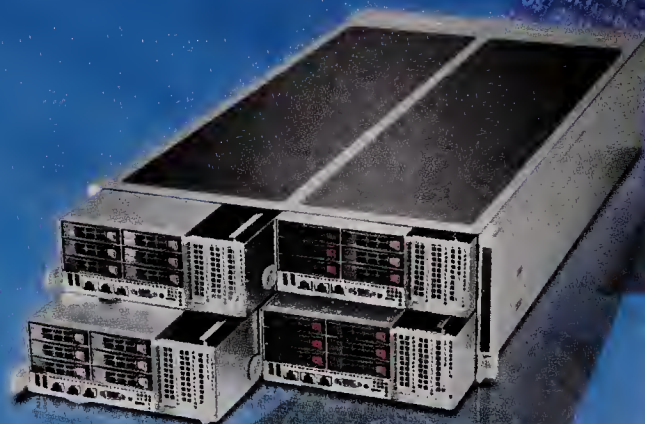
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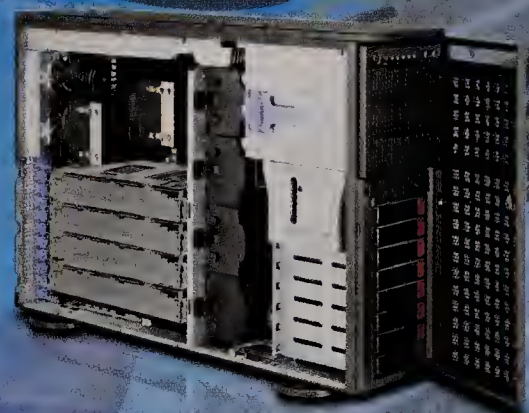


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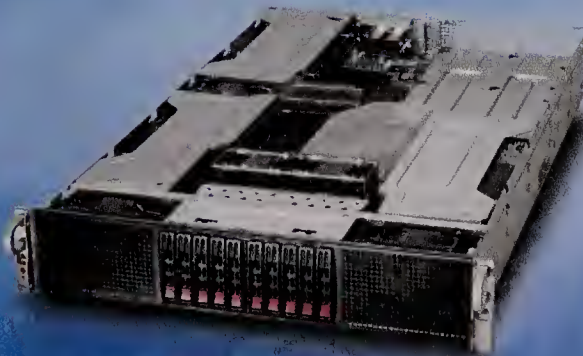
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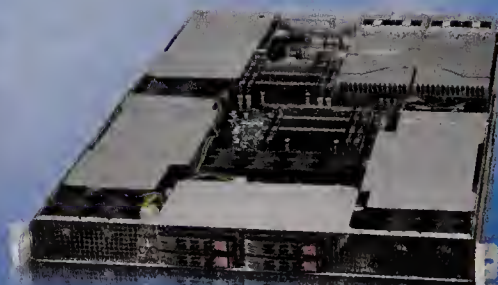
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FROM THE **CEO**

Kick-Start 2013

Happy New Year. Have you made any resolutions yet? If you're still mulling over the possibilities, allow me to share *CIO*'s Top 10 resolutions. As we're fond of saying around my company, "The biggest room in the house is the room for improvement."

10. Lose some weight. I mean the legacy kind, not your own. Resolve to get rid of whatever legacy systems you can this year to make way for more modern architectures.

9. Spend quality time with your (work) family. Especially your chiefs of marketing, research and finance, if you want to deliver the value necessary to succeed.

8. Exercise daily. Get away from your desk and get out there with your customers, partners, clients or distributors. See how they view your partnership and learn what you can do to inspire deeper loyalty.

7. Travel less. Leverage social and collaboration tools to help your business and your employees get more done with less running around.

6. Improve your handicap. Not the golf kind, but your areas of professional weakness. Get better at communication, marketing the value of IT, meeting deadlines and working across company lines.

5. Smile more. How does the rest of the company view your IT organization and its attitude toward end users? What can you do to warm up those relationships?

4. Pay IT forward. With technology now touching every aspect of business, it's time to cross over departmental lines and help your colleagues achieve their business goals. Don't wait to be asked.

3. Eat better. Feed your architecture with healthy new technologies that make cloud, social and mobile work more effectively.

2. Think bigger. Innovate rather than sustain. Make the role of the CIO synonymous with innovation.

1. Value every day. You've mastered the art of delivering IT on time and on budget. Now shift your focus to delivering measurable business value through IT, whether it's enhancing customer loyalty, boosting revenue growth or raising employee satisfaction levels.

Let 2013 be the year that CIOs and IT organizations move beyond business alignment and kick-start the future. And from all of us at *CIO* magazine, we wish you a healthy and prosperous 2013.

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Relocation: A Family Affair

Home life often weighs heavily when deciding whether to move to a different city to take a new IT leadership job **BY KRISTEN LAMOREAUX**

Scott Bond, an IT director who's currently consulting while in transition, is staying put. When he's been offered job opportunities that required relocation in the past, Bond's answer has always been a polite, "No, thank you." That's how Bond has dealt with the age-old question of whether IT managers should relocate for new jobs. Some see relocation as essential to an IT executive's career path; Bond doesn't.

"We have been very open with our kids about [relocation] and have engaged them in the selection criteria."

—Tom Murphy, former CIO, AmerisourceBergen

When asked if his family would consider moving, Bond jokes, "My wife and I have four generations represented within the Philadelphia area, and, no, they would not relocate with us. They all have careers, too!"

For Bond it boils down to a work-life balance issue. "We chose to put down roots to provide stability and a closer proximity to as many family members as possible," Bond says. "We love the greater Philadelphia area. With that in mind, I am confident that my next great opportunity will come from my home region."

As an IT leader who has successfully consulted while also consistently going on job interviews, Bond has worked toward making

his wish a reality. However, as noted in a previous article, resisting relocation could be career-limiting because there are only so many C-level positions available in one city.

Tom Murphy, former CIO of AmerisourceBergen, says it's difficult to "stay local or even regional" and find a global CIO role. "I'm open to relocation because it provides the highest likelihood of finding the right job. By 'right job,' I mean the right role with the right company with the right cultural fit and the right reporting relationship."

Murphy gets to decide what the right job is, but his family will make the decision about relocation.

"While the family is not enam-

ored of the idea of moving, as long as it is someplace I can sell internally, we will do it for the right reasons," Murphy says.

The key is openly discussing the pros and cons of a particular job opportunity with the family, Murphy says. "We have been very open with our kids about the possibility [of relocation] and have engaged them in the selection criteria. We have a list of priorities and selection criteria we use to evaluate opportunities, and location weighs heavily. We have, as a family, already turned down one opportunity in a location that was not desirable."

In lieu of relocation, some CIOs become extreme commuters. They leave their families Sunday night and return to them late Thursday or Friday. But big companies shy away from this option for C-suite executives, Murphy says.

"A lot of people have asked about commuting to another city, but I am finding companies less and less willing to allow this, particularly at the C-level. They are investing a lot and they want to see a commitment from the applicant," he says.

"Relocating is our last preference. First preference is finding the right job locally, second is finding the right role that allows commuting. Third is relocation, but that's what appears to be the most likely to happen."

Kristen Lamoreaux is president and CEO of Lamoreaux Search, which finds IT professionals for hiring managers.

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Attract Gen Y Talent

Three tips to help IT leaders hire and retain tech-savvy twentysomethings

1 Create a team orientation. Millennials "want to regard themselves as part of a greater whole," says Jim Finkelstein, president and CEO of FutureSense, a consultancy. They often thrive in agile development environments, for example.

2 Offer training programs. Millennials are hungry to learn and don't want to be boxed into a single role. "They'll take advantage of every training program that is made available to them," Finkelstein says.

3 Encourage work-life balance. "They want their life now," Finkelstein says. "They want life-style enjoyment, not wealth."

-Thor Olavsrud



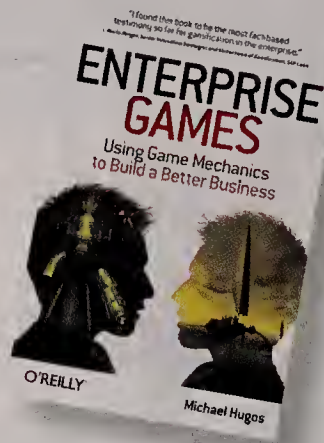
For more tips, see: www.cio.com/article/711561



WORTH READING

BOOK **Enterprise Games** By Michael Hugos

Games have goals, rules and a feedback system that tells players how they're progressing. Games are *engrossing*. Could we apply the same principles to engaging workers in the great game of business? Hugos provides real-world examples of how gamification can be more than a digerati buzzword. O'Reilly Media, \$24.99



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How can I help my IT team members improve their interpersonal skills?

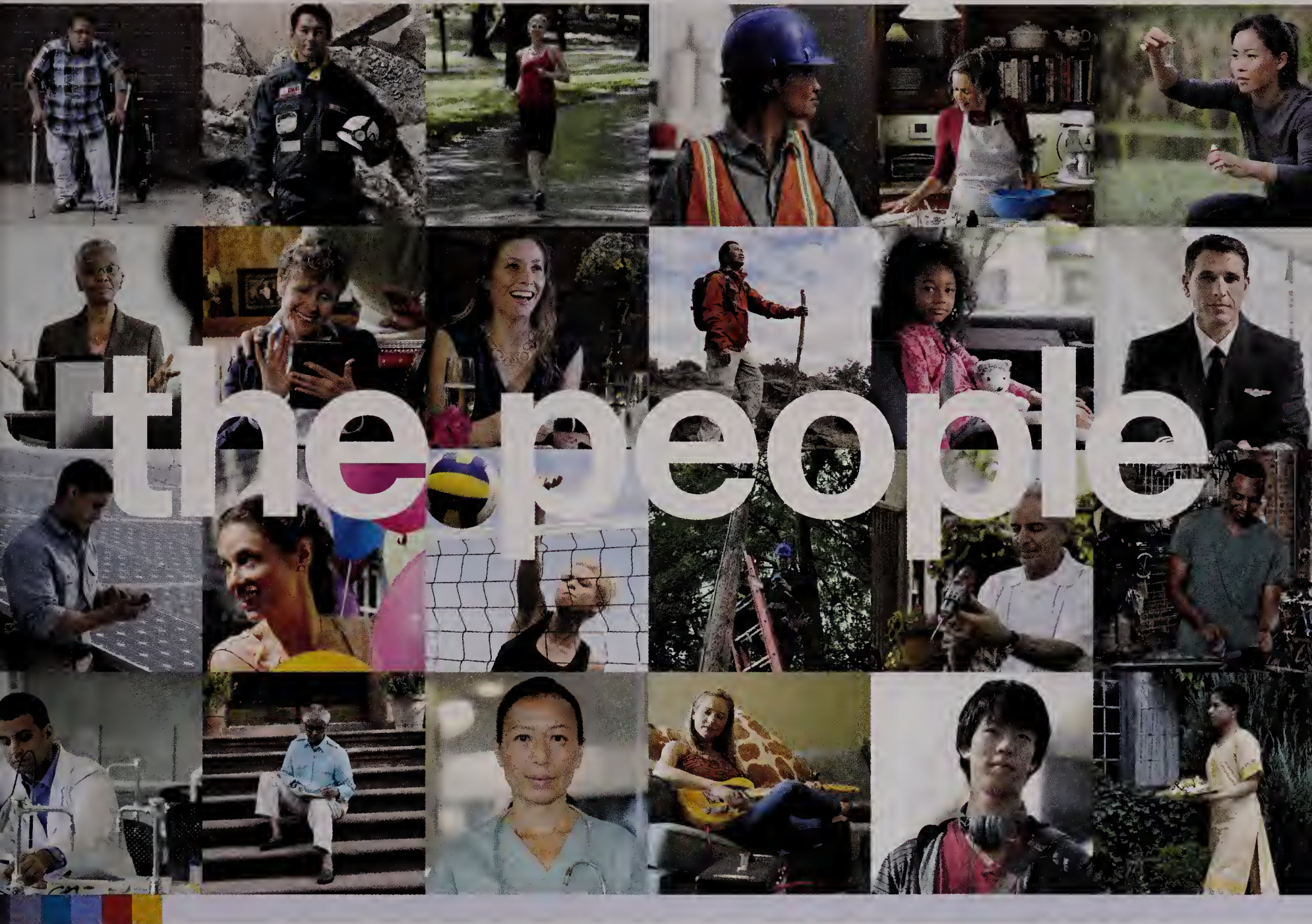
ALWAYS keep in mind that business and technology are so intertwined these days that it's critical for IT professionals to be able to work and communicate across departments. IT workers can develop their interpersonal skills by being involved in more interdepartmental meetings and in customer interactions where they must explain technical issues in a way anyone can understand. The more they interact with those outside their expertise, the better their communication skills will become and the better they will understand the needs of others in the organization.

SOMETIMES the "suits" and "techie" are going to mix about as well as oil and water. That's OK. They don't have to be best friends and get together every weekend for a barbecue or *Star Trek* marathon. But those differing cultures can't be used as an excuse to avoid working together. Consider having IT employees shadow department managers at work to become more comfortable interacting with them. Or place IT workers within other departments so they aren't physically isolated.

NEVER stereotype IT professionals as people destined to be socially awkward and who will never be comfortable developing interpersonal skills. Many IT workers welcome career development opportunities, so put aside preconceived notions and allow them to attend seminars where they'll be exposed to professionals from HR or marketing. Enroll them in classes such as those from Toastmaster's International to help them improve their public speaking and presentation skills.

Anita Bruzzese writes a column on workplace issues for USA Today.com and is the author of *45 Things You Do That Drive Your Boss Crazy*.

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E-Commerce Site Innovates to Maintain Its Lead

INDIA Flipkart is a trusted name in India's fast-growing e-commerce market, but VP of Engineering Amod Malviya knows he must empower users with new tools to innovate and stay ahead of the pack. That drove the creation of two new systems. One is a dashboard that measures the website's performance on various parameters and then sends an alert if, for example, the transaction rate falls below a certain limit.

The other is an A/B framework for testing Web marketing campaigns. It allows Flipkart engineers to simultaneously publish multiple versions of the site. The company can experiment by redirecting a portion of its traffic to an alternative version of the site and studying the results. "When someone proposes a new idea, a lot of precious time is spent debating what-if scenarios. Now we can implement an idea while mitigating its risks," says Malviya. www.cio.in

Firm Gets Streamlined With Shared Services

SWEDEN Swedish cosmetics firm Oriflame is engaged in a massive project bringing IT, finance and HR together in regional service centers. After ten years as IT director, Christian Jönsson is now vice president of global shared services, overseeing six service centers in as many different countries. The rationale behind the move? "To streamline and save money," says Jönsson. Oriflame started the implementation of shared services in finance a year and a half ago. The new approach has already been rolled out in Europe, the Middle East and Africa. In Asia, it's almost complete, and in Latin America it's at the halfway point. Next is the former Soviet Union, including Russia, the source of more than half the company's annual sales of 1.5 billion euros. www.cio.idg.se

IT Gets Ready for New Rules for Sharing Construction Data

UNITED KINGDOM At British engineering consultancy Buro Happold, IT Director Shaun Mundy is preparing for a government-mandated standard called Building Information Modeling (BIM) that takes effect in 2016. BIM is a protocol for creating, managing and sharing digital building information. The data is meant to be a shared resource covering every stage of a building's lifecycle, from design through use and finally demolition. www.cio.co.uk

School System Analyzes Privacy Issues of Using Google's Cloud Services

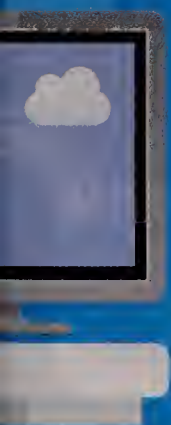
AUSTRALIA Cloud security can be a legal minefield for CIOs everywhere, and those in Australia are no exception. Regulators don't hesitate to go after companies when data breaches violate the country's 1988 Privacy Act. Legal experts say the onus is on the enterprise customer, not the cloud provider, to ensure that data is secured. So Milton Scott, CTO at the Catholic Education Office, had to be very careful about performing due diligence before signing a contract for Google's cloud services. "We've had two law firms work on looking at the privacy and terms and conditions," he says. This included issues related to student information held by the Catholic Education Office. For example, health and safety information about the student or employee can't be retained in Google Mail. www.cio.idg.com.au

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A major retailer reduced the time it takes to optimize store-specific pricing each week from 30 hours to 2.

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The new MRIS Homes mobile app is innovative because it provides accurate data to both real-estate agents and consumers, says MRIS CIO **Michael Belak**.

Going for Broker

An innovative mobile app provides accurate, timely data for homebuyers and real-estate agents **BY AARON LESTER**

The real-estate industry is naturally mobile. What better way to shop for a home than from the palm of your hand as you walk through your favorite neighborhood?

The app stores are crowded with real-estate mobile applications, but analysts say that true innovation has been lacking. That's changing now that Metropolitan Regional Information Systems (MRIS), a mid-Atlantic multiple-listing service (MLS), has developed a mobile app with data that is more accurate and timely than the average real-estate app.

This spring, MRIS invested nearly \$200,000 and partnered with app developer Smarter Agent to create MRIS Homes, a real-estate app that connects both homebuyers and real-estate professionals directly to its MLS data. The app debuted in September.

"Agents wanted real-time updates and to be able to work in the field whenever and wherever they wanted to," says Michael Belak, CIO of MRIS, which sees about \$100 million a day in real-estate transactions. ▶▶▶

..... **52%** Adults who had not heard of Windows 8 before it launched in late October. Associated Press-GfK

►►► **Real-estate app** Continued from Page 15

Already the largest MLS in the country, MRIS plans to take its operation nationwide, Belak says. Having an industry-leading mobile app generates revenue and puts MRIS in a good position for that nationwide expansion, Belak says.

A real-estate app should answer three questions, says Michael Simonsen, co-founder and CEO of Altos Research, a real-estate market analysis firm: "What's for sale? What is it worth? And how is the market overall?" But it's not enough for app makers to provide just these three features, Simonsen says. "As a result, it can be difficult for apps to differentiate themselves."

What differentiates the MRIS Homes app is that the consumer side and the broker side are both integrated with the MLS and are updated with fresh data every 10 minutes, says Eric Stegemann, director of strategy at Tribus, a real-estate technology company. "So customers and agents are seeing the same updated listings at the same time."

Third-party MLS syndicators like Trulia and Zillow can take up to 72 hours to update, says Stegemann. So by the time a potential buyer looks at listings, the data on those sites can be "vastly inaccurate."

MRIS's Belak says that third-party real-estate apps only display properties that agents pay to list and often have unreliable data quality.

"When you can get data directly from the MLS [like MRIS], you get much cleaner data," says Stegemann.

"That's what's most important to me," says Sarah Stelmok, an associate broker who has been using the MRIS Homes app since early October. "Accuracy of information is the hardest thing to get in a mobile app," she says.

"Good MLS services make innovative investments to make the lives of agents easier," says Stegemann. "The way to stay relevant is to continually make agents happy."

Aaron Lester is a freelance writer based in Massachusetts.

"Agents wanted real-time updates and to be able to work in the field whenever and wherever they wanted to."

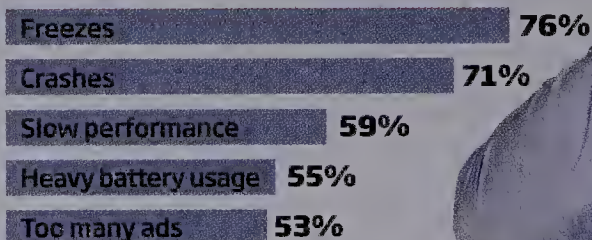
—Michael Belak, CIO, MRIS

crunch

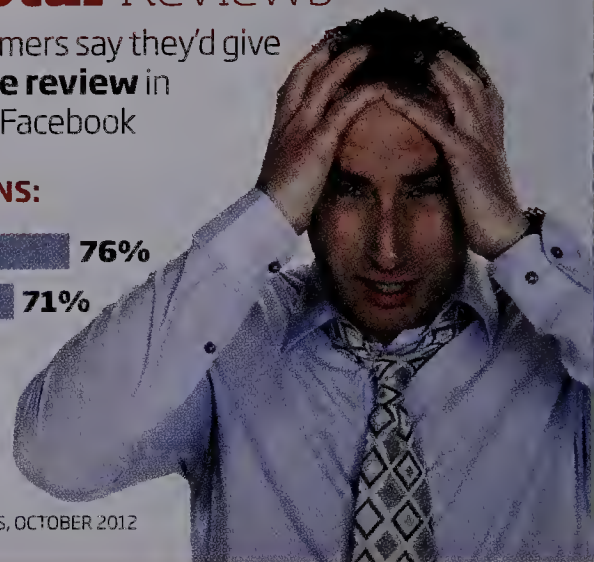
Why Apps Get **1-Star** Reviews

Ninety-six percent of consumers say they'd give a glitchy mobile app a **negative review** in app stores, and on Twitter and Facebook

TOP MOBILE APP FRUSTRATIONS:



SOURCE: APIGEE/USAMP SURVEY OF 502 U.S. ADULTS, OCTOBER 2012



IT Managers Turn Social to Get Advice

IT purchasing decisions can be daunting, but a new study by Forrester Research and LinkedIn finds that IT decision-makers are relying heavily on social networks to help them through the process.

The study, "IT Purchasing Goes Social," based on a survey of 400 IT leaders in North America, finds that 85 percent have used at least one social network for business purposes. The top goals are to get advice from trusted peers, find information quickly and gain access to a broader network of advisers.

Fifty-nine percent of respondents say they are influenced by at least one social network when considering business purchases, and 73 percent say they have engaged with an IT vendor on a social network.

Mike Weir, head of category development at LinkedIn, says that IT managers can make better use of social networks if they follow vendor companies, and join relevant LinkedIn Groups to identify technology experts and pose questions. He also recommends browsing the educational presentations at SlideShare, which LinkedIn recently acquired.

—Kristin Burnham

..... **94%** Advertising sales executives who say that their prospective clients are interested in mobile advertising. PaperG



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New Year, New Ways of Thinking

Tap into research about next-generation techniques for business transformation, collaboration and innovation **BY MADELINE WEISS AND JUNE DREWRY**

At the most recent Society for Information Management Advanced Practices Council (APC) meeting, we heard four research presentations that, at first glance, appeared to be on quite disparate topics: enterprise social architecture, collaboration engineering, digital excellence and business intelligence. But on a second look, we noticed a common theme: CIOs need to think differently in 2013.

It's time to reconsider our business models, how employees collaborate, how we achieve innovation and how we empower staff and customers.

Digital transformation: Breakthroughs often begin by thinking differently about the company's mission. Pages Jaune, the French Yellow Pages, was losing business as paper books became less and less relevant. The CEO led the effort to re-conceptualize the business as one that connects small businesses with local customers, which led to new products and services, such as mobile apps and Web pages for its member companies.

At the APC, we used the transformation of caterpillars into butterflies as a metaphor for this form of breakthrough thinking. Are you focused on speeding up the caterpillar's process? Or are you envisioning that totally new butterfly?

Enterprise social architecture: Think about how to enable collaboration through social tools, such as Flickr, Twitter, Yammer, blogs, whiteboards and pool tables. In addition to the traditional hierarchical organization chart, look at social graphs—maps of our online social connections and interactions—that reveal where we have clusters of expertise to tap and where upcoming retirements will affect employee networks, for example.

Collaboration engineering: CIOs are very familiar with the concept of repeatable processes in organizations, but they don't usually think about employee collaboration in those terms. Researcher G.J. de Vreede has found

that collaboration processes can be identified, standardized and repeated (without the continuing use of professional facilitators). Two APC members served as research sites where de Vreede successfully created repeatable processes for raising innovative ideas for new products (at Verisk Analytics) and for backlog planning in agile development (at Howard Hughes Medical Institute). In both

cases, he designed a collaboration process, demonstrated its viability and then trained company experts to run future collaboration sessions.

Think about what repeatable processes for collaboration and innovation could mean for your organization.

Business analytics: Guess, a global brand in contemporary apparel, employs agile development to create iPad applications that provide data analytics to employees around the world. But instead of the usual process—holding a few inter-

view sessions with users—business-savvy IT staff spent eight weeks shadowing users to fully understand their environment. Instead of developing the apps in-house, the retailer called on experts at MicroStrategy to deliver just what Guess staff needed to innovate faster in their volatile market. For example, Guess staffers recognized that jackets weren't selling well in stores in the Northeast because they didn't look warm (although they were) and quickly shipped the coats to stores in more moderate climates.

Thinking differently underlies the solution to just about every challenge confronting CIOs in the fast-paced and volatile business environment of 2013. Take big data. Are you thinking about pushing out more data to crunch—that is, creating faster caterpillars? Or are you thinking about creating butterflies by exploiting data streams to identify customer needs that even customers haven't thought of yet?

Madeline Weiss is director of the Society for Information Management's Advanced Practices Council (APC). June Drewry is former CIO of Chubb and an adviser to the APC.

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Help for the Harried Sales Rep

Siri has a cousin: Sophia is a voice-recognition app that helps on-the-go sales representatives handle record-keeping chores **BY LAUREN BROUSELL**

VOICE RECOGNITION Smartphones and tablets have been a boon for on-the-go sales reps, who are constantly visiting clients, organizing meetings and trying to close deals from ever-changing mobile offices. Now voice-recognition technology could boost their productivity again.

The market already boasts some well-known voice apps, including Siri Assistant and Dragon Dictation. Sophia, from enterprise mobile app developer Taptera, is a new entrant—an iPhone app designed specifically for mobile salespeople. It lets users speak into their phone to record actions (such as calls or meetings) and follow-up tasks in a Salesforce.com CRM system.

Spoken information such as “called John Smith” and details about the call are transferred to the CRM system as text. The goal is to make

administrative and data-entry tasks as easy as possible to allow more time for actual selling.

Sunbelt Rentals, an equipment rental company, is a beta tester of Sophia, looking to roll the app out to its 800-person mobile sales force. Dean Moore, director of enterprise architecture at Sunbelt, says the ability to enter actions into a CRM while moving on to the next meeting would be especially beneficial for his sales force. “Our folks aren’t going to nice fancy office buildings,” he says. “Our reps go to job sites and construction offices, which are harsh environments.”

Sunbelt uses two other mobile apps for sales, but neither offers voice recognition. Moore says the voice capability “helps minimize, if not eliminate, a lot of the hard work to get data in.” CRM systems can

fail if sales information doesn’t get entered, he notes.

Art Schoeller, an analyst at Forrester Research, says that Siri’s cool factor has created a buzz among consumers, but not in the enterprise. “We don’t see it a lot. I always fear [inflated] expectations versus the reality of delivery.”

Schoeller says that if sales teams incorporate the technology into their regular practices—and IT manages expectations—then voice technology can yield greater productivity.

Companies should try out the technology, he says. “Provide a bit more hand-holding in the trial and get that initial wave of success,” he says. “It has merit and will work, with the right expectations.”

Contact Staff Writer Lauren Brousell at lbrousell@cio.com.

In-Store Wi-Fi Gets a Boost

WIRELESS Cisco Systems and Qualcomm are backing a system to help retail shops, airports, museums and other venues offer personalized information to visitors over Wi-Fi.

The combination of Cisco software and Qualcomm’s Snapdragon S4 chip will let Wi-Fi network owners deliver locally relevant information to consumers’ smartphones even before they log on. When a visitor’s Snapdragon-enabled phone is in the presence of a Cisco LAN, a blinking icon can offer local content, a log-on screen and a downloadable app.

The Fernbank Museum of Natural History in Atlanta plans to adopt the capability later this year. The icon will provide information such as restroom locations, Imax theater showtimes and a link to download a visitors guide.

—Stephen Lawson

Bank Adds Mobile Payment Options

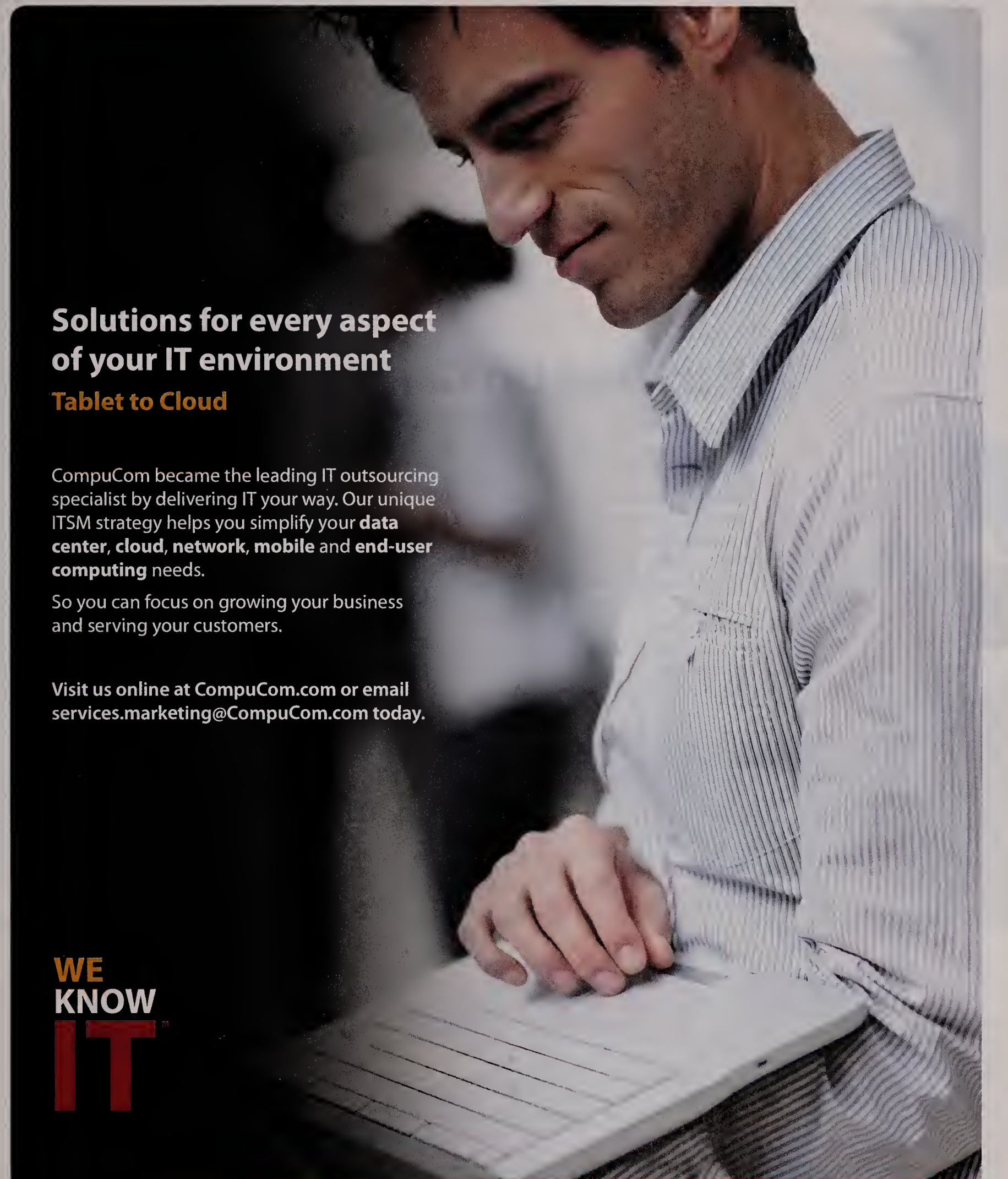
RETAIL Last month, Bank of America Merchant Services extended its mobile payments service to small retailers, allowing them to use smartphones and tablets as point-of-sale terminals.

The entry of the country’s largest processor of electronic payments into the small-retailer market brings more legitimacy to the use of phones as payment terminals and will mean stiffer competition for existing players like Square and Verifone.

Bank of America’s Mobile Pay on Demand service will be compatible with Android and Apple iOS devices. The service is targeted at businesses that process only a few, in-person credit card payments each day.

The bank already offers a similar service, Mobile Pay Business, for retailers that process many payments per month in person, by mail and by phone.

—Martyn Williams



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Busting Up Gangs

A local police force built a mobile-data system to quickly access the records officers need to make arrests **BY KIM S. NASH**

To curb gang activity in California, local courts and law enforcement created a special injunctions process that permits the arrest of known gang members for small infractions—in hopes of preventing more violent crimes. But to be really effective, arresting officers needed timely information to help them make good decisions and follow proper procedures.

The answer was a mobile-data system that puts “information at an officer’s fingertips to make an arrest,” says Ed Ivora, an administrative analyst and head of technology at the Long Beach Police Department.

A gang injunction is a court order making it illegal for known gang members to loiter together, possess spray paint or commit other small crimes in a pre-defined “safety zone.” If a police officer sees such behavior, he can make an arrest. But first, the officer must verify that the person ▶▶



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has been served the court papers.

Before, an officer on patrol would call the records department or a gang specialist on the force to look up the paperwork. The process could take several minutes or sometimes more than an hour if no one was available immediately. By that time, the gang member was likely to have moved on.

Ivora and his staff work closely with officers, including spending time with them in patrol cars, to understand how they work and what kind of technology would help them do their jobs. When an officer came to the IT group to talk about remote access to the gang records at headquarters, Ivora jumped on the idea.

Using existing software and tools, the IT group created a system that ties together images, data and near real-time reporting. Once gang injunction paperwork is processed, a document proving a gang member was properly served the court papers is scanned and stored in a content-management system from Laserfiche. Using Crystal Reports from SAP, the IT group wrote an automated report to run every hour to pick up the latest scans. The system links those documents, plus maps of safety zones, to arrest records and other data stored in the police department's Tiburon records-management system.

Now an officer can access these images and files from a Panasonic Toughbook laptop that's mounted in the squad car and connected to an encrypted VPN. Ivora is exploring whether to add photos of gang members' tattoos and other distinguishing marks to the system to help verify identities.

Paul DeBeasi, an analyst at Gartner, likes Ivora's approach, saying more IT leaders should learn about the jobs people must do before rushing into development. "Rather than thinking about mobility as building an app, step back and look at mobility as a business problem."

Like any organization looking for returns on technology projects, the Long Beach Police Department monitors specific metrics. Most important, Ivora says, is the number of arrests. In 2009, before the system went in, officers made 25 gang-injunction arrests. In 2010, the year the system was installed, there were 140. In 2011, 181. Long Beach was expected to finish 2012 with an estimated 250 gang-injunction arrests. The technology made the policy effective, he says.

Officers are also able to use the system to flag those gang members who haven't been served with court papers and sometimes serve them on the spot, Ivora says. "It's been huge."

Senior Editor Kim S. Nash can be reached at knash@cia.com. Follow her on Twitter: twitter.com/knash99.

Things You Need to Know

WINDOWS RT

1 IT RUNS ON SPECIAL HARDWARE. Windows RT is a Windows 8 version that runs on ARM chips, not x86 Intel/AMD chips, and will only be available pre-installed on the devices that run it. The hardware it requires is built by ARM licensees such as Nvidia, Qualcomm and Texas Instruments, so Windows RT computers, expected to be mostly tablets, should be lighter, thinner, cheaper and less battery-hungry than their x86 Windows 8 counterparts.

2 LEGACY APPS WON'T WORK. Windows RT only runs applications built with WinRT APIs and tools, so applications made for Windows 7, Vista and XP are off-limits. "Organizations need to consider how important backward application compatibility is," says Al Gillen, an analyst at IDC (which is owned by CIO's parent company). Companies that need to run these legacy Windows apps will be better served by an x86 Windows 8 machine, Microsoft says. Users can only install applications from Microsoft's new online Windows Store. However, these restrictions should make Windows RT less prone to malware, Gillen says.

3 IT COMES WITH ITS OWN VERSION OF OFFICE. All Windows RT devices include a version of the new Office suite called Office Home and Student 2013 RT, which comes with Word, Excel, PowerPoint and OneNote. However, this Office version isn't licensed for business use. Microsoft says that the Office version on Windows RT "is our consumer offering. We don't have additional details about the commercial license at this time."

4 IT'S AIMED AT CONSUMERS. Windows RT lacks the IT management tools and features that enterprise, x86 versions of Windows 8 have. Microsoft says that "specific details on how to manage and secure Windows RT devices will be revealed later." Plus, the Outlook client software can't be installed on Windows RT machines. Microsoft says that the Web-based Outlook.com email service and the native Windows Mail app in Windows RT "provide a great consumer email experience on Windows RT devices." Gartner analyst Michael Silver predicts that "very few [enterprise] organizations will adopt Windows RT devices."

5 NOT ALL WINDOWS RT TABLETS ARE CALLED SURFACE. Microsoft decided to build its own tablets, both for Windows RT and Windows 8, under the Surface brand. Some people think that all Windows RT machines are called Surface, but only Microsoft-built ones carry that brand. Others think that all Surface tablets will run Windows RT, but Microsoft plans to also make a Surface tablet that runs Windows 8 Pro. "The branding has been terrible," Silver says.

—Juan Carlos Perez



WHEN DISASTER STRIKES, APPIAN'S WORKSOCIAL PLATFORM STREAMLINES CATASTROPHE-RELATED RESOURCE MANAGEMENT FOR BETTER DECISION-MAKING AND PRODUCTIVITY.

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Crawford's ICT department, architected by Global Chief Information Officer Brian Flynn, exceeds customer expectations by using the most advanced social and mobile business technology available. Crawford uses the **Appian worksocial platform** to galvanize action day-to-day or when major catastrophes strike.

Crawford is "all in" with Appian, and it started with **Crawford Community**, a revolutionary social application that streamlines Crawford's catastrophe-related resource management, from the assignment of insurance adjusters to the management of claims and final claim resolution. Appian is an agile application development tool that has transformed how Crawford delivers solutions to the marketplace. In a short time, Crawford will have delivered six significant applications using Appian. "Using our traditional toolset and methodology, it would have easily been twice as long," Flynn says.

Crawford leverages Appian to drive its Global Systems Roadmap, which focuses on automating tasks for cost reduction and speed; increases onsite effectiveness via tablet and smartphone applications; promotes its green policy by going paperless; leverages analytics for insightful decision-making; and improves collaboration via social media. "Appian is a complete suite and has measurably improved our ability to manage day-in, day-out business as well as significant events such as hurricanes or tornados," Flynn says. "This type of business application improves our own processes and helps us satisfy customers."

Among Crawford's Global Systems Roadmap applications are **Claim Portal**, **Global Claim Intake**, **Claim Assignment & Scheduling** and **GTS Large Loss Management**. The solutions use Appian's capabilities and the adjusters' mobile devices to allow Crawford to pinpoint the right adjuster to review a claim, based on location, capacity, and a past performance scorecard. Adjusters then use the Appian mobile app to upload

photos of a claim site, along with electronic claim forms directly from an iPad, iPhone, BlackBerry or Android phone. The result is greater speed, participation and accuracy in Crawford's core company mission.

How it works: Appian's worksocial platform uniquely ties social business directly to the core enterprise systems on which Crawford's business is run. Worksocial offers real business value by integrating social collaboration and native mobile apps with the processes and data that drive the business. It delivers a new, highly transparent and collaborative style of working that results in productivity and better decision-making while creating a more informed and engaged workforce.

"The Appian BPM Suite is truly changing the way we work with our partners and how we service our clients," Flynn says.

The Appian mobile app enables adjusters to upload claim site photos and electronic claim forms directly from an iPad, iPhone, BlackBerry or Android phone.



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ANALYST VIEW

Tablets Require Business Input

The IT department should stop dominating the decision-making process for tablet projects **BY TED SCHADLER AND SIMON YATES**

Tablets are the darlings of hypermobile employees and business leaders looking to improve their processes. Because each tablet-enabled business scenario is different, only business people—those meeting with customers, inspecting stores, or sitting in decision meetings, for example—know what they really need from their tablets. However, a critical concern has come to light: IT dominates the tablet decision process—and it shouldn't.

IT can't intuitively divine everything needed for tablet success in every business scenario. Even simple things like screen size, not to mention big choices like which platform, could make or break the strategy. To avoid these problems, we have identified six steps that IT should take to show it's making a concerted effort to involve employees and business leaders. We call these "decision flash points" to emphasize how important they are:

1. Identify the business opportunity. Even at the outset of a project, you must include line-of-business executives and the employees who pester you for support.

2. Initiate the evaluation. Involve a member of the

business team to make sure you take into account all the needs, potential barriers and desired outcomes.

3. Test and evaluate solutions. Get a business sponsor who will focus on employee adoption and business outcomes.

4. Recommend vendors. When it comes to the tools that employees use to get work done, your choice in vendors matters a lot. For tablets today, the choice is clearly the iPad. But employees also care about the applications. That's why they bring in Dropbox for file sharing and Skype for customer communications. Business needs to be involved here, too.

5. Implement the solution. IT must insist that business sponsors put some skin in the game and be part of the implementation.

6. Evaluate the outcome. One company found that tablet-wielding sales partners were 20 percent more profitable than their clipboard-wielding colleagues.

Ted Schadler and Simon Yates are vice presidents and principal analysts at Forrester Research, where they serve CIOs.

Software Bots Could Replace IT Offshoring

Robots vacuum floors and pack boxes in warehouses. Soon they may take IT and business-process work away from offshore outsourcers.

For example, startup Blue Prism makes a toolkit for creating software robots that perform rules-driven business processes.

Blue Prism calls it "robotic automation." James Slaby, an analyst at HfS Research, calls it "the newest labor option in the global business services toolkit." The software is ideal for "the routine kind of work you might

entrust to low-level data-entry clerks or entry-level IT staffers," he says.

"Indian vendors have thousands of staff doing similar work now with high rates of turnover and rising costs due to inflation. Automomics are making the offshoring of tasks irrelevant," he says.

Blue Prism says its virtual staffers cost a third of what offshore labor does. The company has 1,000 robots operating at customers including Telefonica, Fidelity Investments and Experian.

Meanwhile, IPSoft, which calls itself an autonomic IT service provider, says that the "infrastructure of tomorrow will not be managed by people, but by expert systems." The company's self-governing IPCenter

can detect, diagnose, remediate and escalate events and incidents—and record the lessons it learns in a shared knowledge library. The company is expanding into business-process automation.

Within a year, one enterprise customer with more than 10,000 servers previously overseen by humans had automated 75 percent of its server management and troubleshooting and reduced its infrastructure headcount by half, says Jonathan Crane, IPSoft's chief commercial officer. A financial services firm integrated IPCenter into its trading platform to diagnose and fix failed trades, reducing troubleshooting time from 40 minutes to 40 seconds.

—Stephanie Overby



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Find Your Social Media Maven

Using Facebook and Twitter for marketing? Here's how to find the right talent in a relatively new field. **BY KRISTIN BURNHAM**

A **smore and** more businesses increase their presence on Facebook, LinkedIn, Twitter and other social networks, social media jobs, too, are predicted to rise. According to the Bureau of Labor Statistics, social media jobs will jump by 21 percent in 2013.

That's a lot of hiring.

Social media specialists—sometimes referred to as social media managers or social media marketers—bring an assortment skills to businesses looking to beef up their presence and results on social networks.

"Anyone can build a Facebook page, but it doesn't mean it's successful. These people go deeper and rely on analytics to run good campaigns, tying it all back to ROI," says Gina Oliveri, senior consultant with executive staffing firm Bowdoin Group.

Here's a look at what social media specialists do, including the skills they bring to the table, their responsibilities and typical salaries.

What They Really Do

Social media specialists are responsible for generating and maintaining a presence on social media sites, such as Facebook and Twitter, and for building an audience through campaigns, ads and updates, Oliveri says.

Just as important as the campaigns they run are the data points they derive. Social media specialists gather statistics—such as the number of likes, retweets or sales leads—to gauge a campaign's success.

Social media specialists likely reside in the marketing or PR department, but usually work with a number of the business units. Job candidates often come from a junior or entry-level marketing or advertising position.

Social media specialists should have a deep and personal familiarity with the two biggest social networks: Facebook and Twitter. But they should also know something about other social media platforms, such as

Foursquare, Digg and StumbleUpon, Oliveri says.

It's important for candidates to understand the business's audience, such as its demographics and interests, in order to target posts appropriately. Strong writing and presentation skills are also key, whether the specialist manages external or internal social networks.

Lastly, data analytics skills are becoming more necessary so the specialist can calculate a return on investment and determine whether the business can generate revenue from social media campaigns. "You need to be a number-cruncher at some level—put on headphones and look at the data, then come back with intelligent insight so the business knows what to do next," Oliveri says.

Salaries for social media professionals will vary widely based on factors such as the size of the company, location and experience level. Generally, Oliveri says, social media specialists should expect to be paid about \$55,000 for an entry-level position, all the way up to low six figures for a managerial position at a large company.

Big companies may have a full-fledged social media team, according to research by Jeremiah Owyang, an analyst at Altimeter Group. The team is typically led by a "social strategist" who is both a visionary and responsible for achieving business results. Team members may have titles such as community manager, Web developer, content strategist and social media manager.

That social media manager title comes with duties such as "launching programs, managing campaigns, dealing with agencies and keeping teams on timelines," Owyang says in a blog post. "Beyond finding social media expertise, look for [people who are certified as] project managers," he says.

Senior Writer Kristin Burnham covers consumer technology, social networking and enterprise collaboration for CIO.com. Follow her on Twitter: twitter.com/kmburnham.

Data analytics skills are becoming more necessary so the specialist can calculate a return on investment.

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Shaking Up the Outsourcers

Cloud-service vendors—especially hosted-software providers—are taking a bite out of the traditional IT outsourcing market **BY STEPHANIE OVERBY**

The rapid growth of cloud software contracts may put a crimp in traditional IT outsourcing, particularly in the Americas.

"There is definitely some displacement or substitution of cloud for what might have otherwise been delivered through more traditional outsourcing models," says Gartner research manager Bryan Britz.

Software-as-a-service (SaaS) and infrastructure-as-a-service (IaaS) are taking very different trajectories, says Stanton Jones, an analyst at Information Services Group (ISG). "SaaS is more narrow, and we're seeing units outside of central IT lead the drive to evaluate and purchase," Jones says. "IaaS is broader and is IT-led. We do not see as much growth here because IT functions are preferring to play it safe and stick with more modernized and standardized infrastructures."

But software in the cloud could take a bite out of both IT infrastruc-

ture and applications outsourcing. IaaS providers won't take over a full-fledged infrastructure sourcing deal from a traditional IT service provider, says Jones. But they "can take over an entire functional stack like HR, displacing the incumbent hosting provider and the application development and maintenance provider." Plus, vendors that turn their on-premise software into services can displace traditional IT service providers.

Early adopters of SaaS have found that it's not always cheaper, but they're drawn by its speed of implementation, access to features, and mobile capabilities, says Jones. What's more, they don't have to go to IT to get it done. "They get to drive the bus for the first time," says Jones.

Leading the way is human resources. "A large percentage of our HR outsourcing clients are taking a long look at SaaS," says Jones. Just behind them in cloud contracting

activity is the IT department, most often looking at communication and collaboration tools and cloud-based IT service management, Jones says.

But enterprisewide adoption of cloud-based services is hit or miss.

"Units outside of IT want to move these projects forward, but when they get to the real work of building a business case and negotiations, the projects can bog down because they are focused on features, not the impact to IT, legal, finance and procurement," says Jones.

In general, enterprise IT is continuing its move away from the staff-augmentation model of outsourcing to fully embrace multi-year outsourcing contracts with outcome-based service-level agreements, Gartner says. That should keep the IT outsourcing sector growing through 2016.

Stephanie Overby is regular contributor to CIO.com's IT Outsourcing section.

Study Warns Clouds Could be Used as Giant Botnets

Some cloud providers fail to detect and block malicious traffic originating from their networks, which provides cybercriminals with an opportunity to launch attacks in a botnet-like fashion, according to a report from Australian security consultancy firm Stratsec.

Researchers from Stratsec, a subsidiary of British defense and aerospace giant BAE Systems, reached this conclusion after performing a series of experiments on the infrastructure of five "common," but unnamed, cloud providers. Cybercriminals could easily create and use botnets that run on cloud-based virtual machines, says Stratsec senior consultant Pedram Hayati.

Anyone who learned the cloud provider's API would find it relatively easy to set up and administer such a botnet, Hayati says, and cloud-based botnets would be cheaper and take less time to build than traditional ones.

"Based on our experiment," Hayati says, "with a budget of as low as \$7 and [a] minimum hardware specification, it is possible to

set up a botCloud," which is defined as a group of cloud-based virtual machines "that are commanded and controlled by a malicious entity to initiate cybersecurity attacks."

However, one disadvantage to operating such a botnet is that it would be easy to shut down once the cloud provider gets an abuse notification from security researchers or victims.

Nevertheless, "I believe that cloud providers should definitely look a bit more into improving the security of their configurations," says Costin Raiu, director of the research team at antivirus vendor Kaspersky Lab.

When making the switch to cloud computing, organizations should search for cloud providers that use high-end firewalls and intrusion-detection systems and which undertake regular independent security tests of their environments, Hayati says. "Do not get tempted with ease-of-use and cheap cost."

—Lucian Constantin

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GAINING STATUTURE

CIOs are earning more business credibility, sharpening customer focus and raising IT's strategic profile, according to our **2013 State of the CIO Survey**

BY KIM S. NASH

t

THE MEASURE OF A CIO is in how everyone else in the company views the IT organization. Many CIOs strive to create an IT group that is the department people call first when a new business idea strikes. Even better: They strive to be there at the idea's birth. Building such a strategic IT group takes time and tactical smarts—and it's a journey of increasing importance, according to our 12th annual State of the CIO survey.

Sixty-four percent of the 563 IT leaders we surveyed plan to focus on marketing the IT department in 2013, to show the business more of IT's capabilities. That's up from 55 percent in 2012. Results from the past three years of surveys suggest that CIOs are increasingly taking steps to solidify or elevate their team's relationship with business stakeholders by delegating more, developing leadership and cross-functional skills among their IT staff, and turning their attention to customers. One-third of CIOs now visit customers, up from 18 percent two years ago.

"With credibility," says Warren Kudman, CIO at the \$8.1 billion Sealed Air, "you can then have conversations with business partners about opportunities to differentiate [your company] through technology or even new lines of revenue that are IT-enabled."

But not everyone is there yet. It's heartening that 20 percent of CIOs say their IT groups are seen as business peers who develop, not just enable, business strategy. However, the majority remain in the muddled middle: 32 percent as influential collaborator on IT, 26 percent as service provider and 15 percent as cost center. Still, we're seeing a shift to the advanced end of the spectrum. The business strategist tally of 20 percent, for example, is up from 15 percent in last year's survey, while the 15 percent cost center assessment is down from 21 percent.

Tom Farrah, CIO at Dr Pepper Snapple Group, began to develop mobility and visual analytics projects only after sending IT people to the field to understand how sales agents and truck drivers work.

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Dr Pepper®

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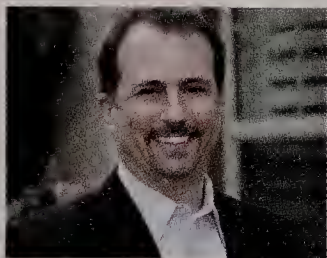
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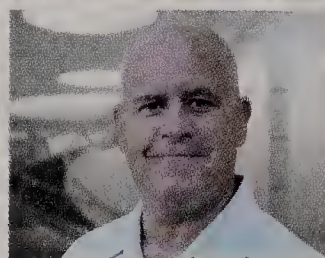
Dave Ballew
Director of Enterprise
Media Services
Walt Disney Co.



Dean Barry
SVP and CIO
Cast and Crew
Entertainment Services



Tony Coba
SVP and CIO
Miami Heat



Bill Donohue
CIO
Mindbody



Valerie Kwiatkowski
CIO
ICU Medical



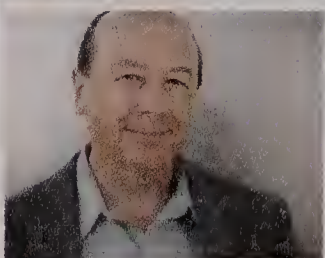
Chris Laping
SVP, Business
Transformation and CIO
Red Robin Gourmet Burgers



Allan Lubitz
SVP and CIO
Mercury Insurance



Keith Morrow
Executive VP and CIO
Epsilon



Terry Prime
CTO
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Jack Young
VP of IT and CIO
Accelrys

ELEVATING Your Game

Our 12th annual survey shows that CIOs are raising IT's strategic profile

Building Influence

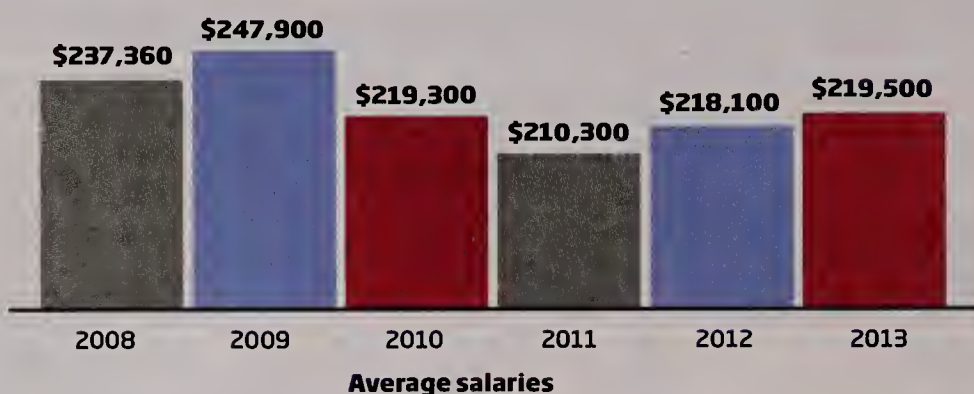
To improve business relationships, CIOs are meeting with stakeholders and delegating tactical tasks so they can focus on more strategic matters



MULTIPLE RESPONSES ALLOWED

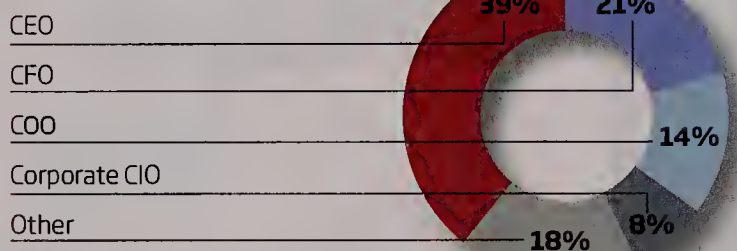
Compensation Inching Up

Average annual compensation for IT leaders hasn't returned to the levels seen in 2008 and 2009:



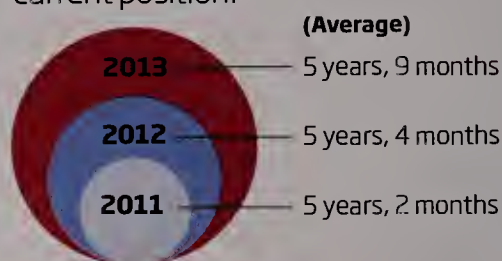
CEO or CFO?

To whom do CIOs report?



CIO Tenure Edges Up

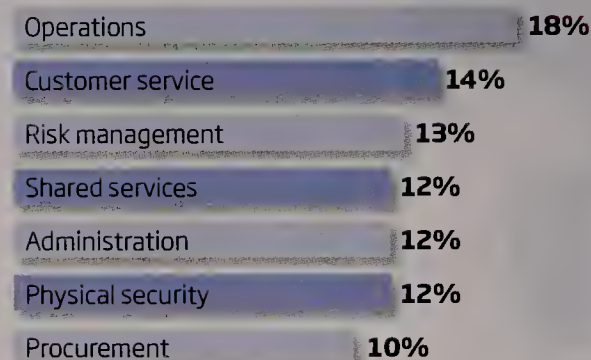
How long have you been in your current position?



Doing Double Duty

Some CIOs are simultaneously leading non-IT areas of the business

Most common add-on leadership roles:



More CIOs Are Becoming Business Strategists

Fewer CIOs this year say their company's business stakeholders perceive their IT organization as a cost center (**15%, versus 21% last year**), while a higher percentage are viewed as business peers engaged in developing business strategy (**20%, versus 15% last year**). Meanwhile, the number of CIOs who act primarily as "business game-changers" has more than doubled since 2010.

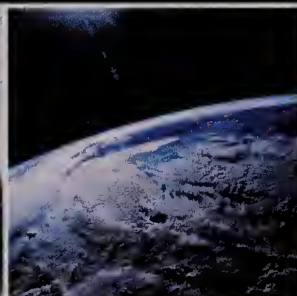
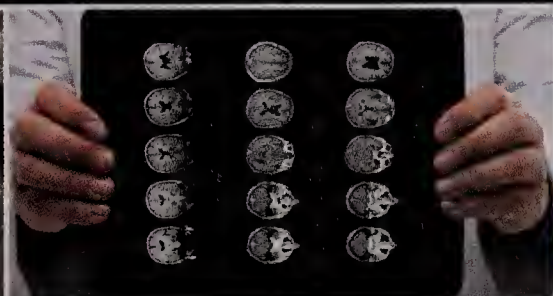
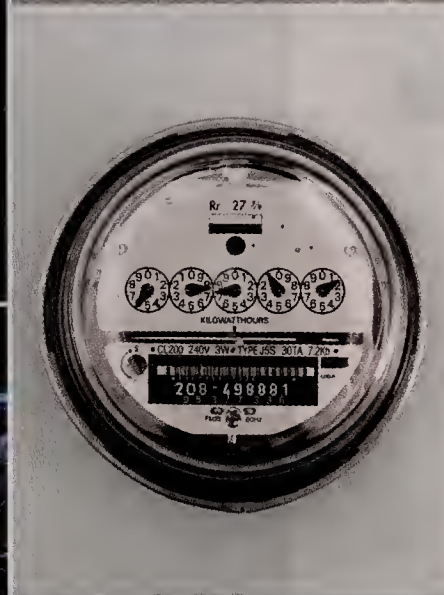
A REPORT ANALYZING THESE TRENDS IS AVAILABLE FROM THE CIO EXECUTIVE COUNCIL: COUNCIL.CIO.COM/PROGRAMS/FS2013

METHODOLOGY Members of CIO's audience were invited to participate in an online survey between September 4, 2012, and September 18, 2012. Results are based on 563 respondents who indicated they are the head of IT at their company or business unit. Sixty-six percent of respondents are in North America. The margin of error on this sample size is +/- 4.1 percent.

-Carolyn Johnson, Research Director



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CISCO



Rather than push for an IT spending spree right now, **Bill Haser**, CIO of Tenneco, wants to combine technology with new processes to make employees more productive.

Many of the mobile and analytics projects CIOs plan for 2013 may enhance perceptions, conceived as they were in cooperation with business partners and aimed at high-visibility targets such as customer-experience improvements. Tom Farrah, CIO at Dr Pepper Snapple Group, has begun mobility and visual analytics work after sending IT people to the field to understand how sales agents and truck drivers work. "Our job is to help our sellers sell and drivers deliver," he says.

Clean, clear thinking from the CIO about basic corporate goals helps keep IT from drifting into nonessential areas. But, our survey shows, CIOs are learning they must also employ a variety of management tools to support the mission—and enhance their own value.

Delegation and Mixed Meetings

To generate goodwill quickly, it's always effective to use some time-tested methods, such as completing quick-win IT projects for business colleagues. But any self-respecting C-suite expects a lot more than just quick wins, which means CIOs have to use more sophisticated and nuanced tactics to elevate IT.

For example, it makes sense that by delegating more IT operations to high-performing direct reports, a CIO can gain time to focus on strategic issues. But there's no single formula for decid-

ing what to delegate and to whom.

Kudman at Sealed Air created the position of VP of IT business management to monitor technology spending and manage

I.T. BUDGET METRIC

5.2%

The IT budget as a percentage of revenue (on average)

"We say, 'Here's the strategic intersection between what you want to do with the business and what IT can do.'"

-Bill Haser, CIO, Tenneco

IT vendors. He also created a "value-management team" of 20 to 25 people responsible for making sure the company gets the maximum possible value from already-installed software and hardware. The team also educates business units and even IT staff about the capabilities and capacities of existing systems, Kudman says. "If I didn't have people I could rely on, how I spend my time would be very different."

By delegating, he frees up time to brainstorm with non-IT peers about ways to push Sealed Air ahead of rivals in the food and medical materials packaging business. The company recently started to deploy machines that monitor whether healthcare workers wash their hands between patient visits. The devices gather data, collect compliance reports and send alerts to supervisors. The IT group discussed the business case for this new technology-based revenue stream and suggested methods of data storage and security to the business unit. That's the kind of advanced strategy-shaping CIOs should strive for, he says.

Not only do CIOs worry about business units or departments going around IT to contract with cloud vendors to provide IT services, but also they worry that colleagues will ignore internal IT when devising new technology-enabled business models, Kudman observes. "The most important thing is to be the trusted adviser."

At Potlatch, a \$500 million timber and wood products company, delegation looks different. Having assigned infrastructure operations, including phone systems and networking, to a couple of IT staffers, IT Director Brent Gregory is now redistributing applications work. He encourages several of his trusted staff to learn more about specific business areas, such as running mills and cutting and replenishing timber. The goal is to have these IT people take ownership of the applications that most matter to those groups, Gregory says.

"I'm really trying to push them to do the same work I'm doing for their particular specialties," he says. "I'm trying to focus more on getting with the moneymakers of the company."

Meeting frequently with key influencers is the number-one way CIOs improve stakeholder relations. (See "Building Influence" chart, Page 36.) Again, the idea of having in-person meetings with those you want to build relationships with sounds simple. Doing it, though, may not be.

When the IT staff at WD-40 Company started to attend other

departments' meetings, all parties "were uncomfortable at first," says Bob Hoagland, vice president of IT. Business counterparts may have wondered whether IT was there to check up on their technology decisions, he says. But the aim was for IT people to listen for hidden problems that might be easily solved by technology.

For example, an applications manager heard that a woman in marketing was juggling data from 175 Excel spreadsheets. The IT staffer wrote a Web-based application that dissolved the marketer's stress. "This wasn't even her primary job," Hoagland recalls, "but we [saw] in that conversation a potential solution we [could] provide."

Sending ERP administrators to mingle with colleagues in other areas of the business will help smooth the workflow changes expected from a

new quality-management system due to be installed in 2013, he says. Any initial discomfort about mixed meetings was worth it. "The more people are involved with each other, the more ownership they will take for building relationships," he says.

Mobile and Big Data Reality

A CIO creates an effective IT group when he makes sure his technologists understand how employees and external customers behave, says Robert Wollan, global managing director of Accenture's sales and customer service practice.

In particular, the IT group can help marketing, sales and other departments isolate what customers notice and seem to value, he says. That is, IT can provide tools to tease out what promotions, incentives and ways of interaction elicit the most reactions or most lucrative responses. Then IT can help formulate technology plans to do more of what works, he says.

Among IT staff, CIOs should encourage careful watching of employees and customers alike, says Farrah at Dr Pepper, a \$5.9 billion manufacturer of 50 brands of beverages.

Farrah didn't plunge into mobile applications early on. Instead, he assigned small teams to study innovation in IT areas, such as mobile technology and analytics, as well as in business functions, such as field sales in the beverage industry. After they researched, they reconnected to pool their new knowledge. The findings: A Dr Pepper salesman typically has three minutes to greet, sell and possibly sign a deal with a store manager. Knowing that, the IT group set out to design a mobile analytics application that delivers accurate, current data about a specific store



"Our job [in the IT department] is to help our sellers sell and drivers deliver."

-Tom Farrah, CIO, Dr Pepper Snapple Group

or product in a way that will grab the store manager's attention.

The pre-work of studying and planning will serve the company well, Farrah contends. He is piloting a custom application for Apple iPads that allows a salesman to conduct business all on one screen—no jumping to multiple screens or endless scrolling. Reports once rendered in many columns and rows are now graphical and tailored to particular customers or sales goals. "They can use more of the three minutes to sell rather than manipulate the tools," he says.

Similarly, the Evangelical Lutheran Church in America, a nonprofit religious group with 4.3 million members, is taking a measured approach to analytics, says Jon Beyer, head of IT.

After hiring consultants to inventory the church's digital, analog and paper archives in early 2012, Beyer is now developing a data management and analytics strategy. Now that he knows he has 250 terabytes of unstructured data, he wants to turn it into useful information.

For example, IT may catalog the thousands of hours of video shot at various church events, applying metadata tags that identify people in the scenes. From there, constituent outreach managers could find people who attend events frequently, cross-reference them with an existing CRM database and solicit them for donations, Beyer says. First, though, data cleansing has to be completed, eliminating duplicate entries and reconciling questionable entries. "We're Lutherans. People spell 'Andersen' all different ways, and we have thousands of them in our database," he says.

After a false start with CRM and analytics a few years ago, under a different IT leader, Beyer plans to catch up in the next 18 months. Generally, the reality of big data may be catching up with the hype. Survey results suggest IT leaders are more aware of such initiatives now after they failed to make big inroads last year. Fifty-nine percent of the IT executives we surveyed classify their organization as a late adopter or laggard when it comes to big data projects, and just 13 percent have completed a major big data initiative in the past year. However, 37 percent expect to finish at least one within the next year.

Money Mind-Sets and Cross-Training

Smart CIOs understand the financial levers used in different parts of the company to ease or increase pressure. At WD-40, for example, a money mind-set pervades IT. CIO Hoagland says

that's partly because it's a small company—\$343 million in sales for 2012—but a big brand. He knows, for example, that revenue per employee is about \$1 million. He likes the attitude of one of the newer members of his staff who, when looking at the cost of new systems, asks, "How many cans of WD-40 are we going to have to sell to buy that?"

That kind of thinking is especially valuable in tough times, says Bill Haser, CIO of Tenneco. As the global recession erases some investment projects from a CIO's wish list, Haser says, another way to elevate IT is to improve processes. Tenneco isn't suffering; sales have jumped 55 percent since 2009, from \$4.6 billion to \$7.2 billion for 2012. The

company, which makes emissions-control and ride-control systems for cars and other vehicles, benefits from the stricter and more complex environmental regulations emerging worldwide, Haser says.

But rather than push for an IT spending spree, Haser's big goal right now is to make sure employee productivity rates match company growth. To do that, he will combine new technology with new processes. He wants to use cloud computing and other newer technologies to help employees be more effective. For example,

in an effort to improve the productivity of existing employees, Haser set up cloud versions of project-management software and a human resources tool. "We don't want to add headcount at the same level we're adding revenue," he says.

Like other CIOs in our survey, Haser is training his staff to be better partners with peers outside IT, and he's developing their cross-functional know-how. He started "technology councils" in 2010, where IT managers periodically meet with tech-savvy managers in a given business unit to discuss the future. Sometimes a council focuses on one issue, such as new ways to measure emissions. As a result of a council held last year, IT is helping Tenneco engineers on different continents use collaboration software to share product designs more easily.

"We say, 'Here's the strategic intersection between what you want to do with the business and what IT can do,'" Haser explains. **CIO**

Research Director Carolyn Johnson contributed to this report. Senior Editor Kim S. Nash can be reached at knash@cio.com. Follow her on Twitter: twitter.com/knash99.

BIG DATA ANALYTICS:

Meeting Business Needs and Raising IT's Profile in the Organization



As data stores continue to grow and business units recognize their potential value, the demand for Big Data analytics increases. And IT faces the critical task of preparing the IT infrastructure for this business-enabling technology.

But CIOs have a choice. They can react to business demands for Big Data analytics capabilities as they come along, or they can play a proactive role enabling the business and, as a result, raise IT's profile within the organization. Doing so requires a strategy for implementing a Big Data analytics solution.

According to a joint survey conducted by CIO and SAS, "Infrastructure Readiness for High-Performance Analytics," more than two-thirds of survey respondents have plans or are prioritizing plans to modify or build an enterprise-wide architecture to support Big Data analytics requirements. And that's good, because two-thirds of respondents are already experiencing increased demand—coming largely from operations and finance—to support new analytics capabilities. In order to get ahead of Big Data analytics

demands, CIOs and their IT organizations need to act now.

So, where do you start? The IT infrastructure may need to support any number of Big Data architectures: data warehouses, private cloud, in-database analytics, analytic appliances, high-performance computing, complex event processing, etc. Given the number of technologies and limited budgets, CIOs must be strategic in their investments and prioritize the elements of their Big Data architecture to reflect the needs of business users.

Survey respondents whose organizations view these as strategic investments report that *by the end of 2012* the following architectures will need to be supported in their organizations:

- **In-memory processing**—Ideal for Big Data, in-memory analytics enables detailed data to be loaded into memory for rapid analytical calculations and queries. Analytical processes run in parallel in a distributed manner on all the data in the memory, enabling users to solve complex business scenarios and uncover timely and reliable insights.
- **Hadoop**—Hadoop is an open source framework that is drawing interest as a low-cost alternative for Big Data

storage, uses commodity-based hardware and performs distributed processing. IT organizations are looking into Hadoop as an infrastructure component and options on how to integrate and analyze data stored in it.

- **In-database analytics**—Instead of moving data from a database into an analytics environment, in-database analytics brings the analytics processing to the data. Less data movement enables faster predictive insights and better data governance.

For a CIO looking to provide business with a strategic advantage and raise the profile of IT while doing so, Big Data analytics doesn't stop with these tools and capabilities. Business units will have jointly evaluated with IT whether the Big Data analytics solution meets their specific requirements and determine the project's success.

To learn which Big Data analytics capabilities CIOs should prioritize and the criteria business units will use to evaluate the solution, download the white paper at www.cio.com/white-papers/sas-big-data

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42

SOUNDING BOARD

Not Your Average CTO

How three companies are redefining the role of the chief technology officer

ROSE SMITH, CAMPBELL SOUP COMPANY

THE CTO AS REALIST

Campbell's CIO Joe Spagnoletti sets the company's IT agenda and relies on me and my team, the technology experts, to bring the plan to life. At Campbell, we understand that our people are as important as our tools, and we value management skills as much as we do technical skills in a CTO.

Drawing on my experience in both applications and management, I empower my team to gather and share technical knowledge with our leadership team, the function and the broader organization, acting as both students and teachers of IT. For example, we develop formal road maps, conduct regular meetings with our vendors, and share articles on trends and hot topics.

Joe and I are fortunate to have built a strong relationship based on mutual ▶▶▶

The CIO Executive Council is a global peer advisory service and professional association of more than 500 CIOs, founded by *CIO's* publisher. To learn more, visit council.cio.com.



Rose Smith,
CTO, Campbell
Soup Company



**Christopher
Reigut,**
CTO, SquareTwo
Financial



Hagen Wenzek,
Global CTO, IPG
Mediabrand

understanding of each other's objectives and the challenges we face in our respective roles, which leads to easy agreement on key decisions. And he and I balance each other out—he is the forward-thinking visionary, while I am the practical realist. That combination helps us craft solutions that connect our 19,000 employees to each other, our customers and our partners.

CHRISTOPHER REIGRUT, SQUARETWO FINANCIAL

THE CTO AS UNBIASED COP

The CIO and I divide up IT on the basis of “what” versus “how.” The CIO, Bill Weeks, is responsible for the “what”—investment planning, beginning with understanding what our lines of business are trying to accomplish. As CTO, I am responsible for the “how,” as in how we plan to deliver on our promises. Because we are a midsize IT shop, we cannot do everything ourselves; part of my responsibility is figuring out how to staff projects and when we need to bring in outside help.

Regardless of job titles, the CIO and I consider ourselves diagnosticians tasked with helping the business solve problems even when the solution has nothing to do with technology. We're not order-takers. In that sense, my CIO needs me to do two things: 1. Provide an outsider's view of the business problem based on my consulting experience and 2. help him frame our technology plans in terms that resonate with our business partners. It's not good cop-bad cop, but more like good cop-unbiased cop.

My approach to this role is shaped by my belief that there's a difference between “leading with technology” and “leading—comma—with technology.” If I'm leading with technology, I am simply making a suboptimal business process more permanent by implementing new IT to support it. I'm letting the technical solution dictate how we do business. In contrast, leading, with technology, is having the wisdom to recognize when IT is dictating a process, and instead helping our business partners redesign and improve inadequate processes that we can better support with technology.

HAGEN WENZKE, IPG MEDIABRANDS

THE CTO AS PRODUCT LEADER

As global CTO for IPG Mediabrands, I manage the technology capabilities that we provide to our external customers, as well as the back-office tools we use internally. My client-facing responsibilities are not unlike those of a CIO, or even a product-innovation executive. As such, I rely on the technical expertise of my executive leadership team, including my IT director, in much the same way a traditional CIO relies on a traditional CTO.

My job is to present technology solutions in terms that make sense to our clients, and over the years, I have learned what resonates with them and what gets ignored. The key is to focus on the results—what your customers will get and when they will get it. My clients do not need to understand all the details, such as how cloud works, to appreciate what will work best for them. I generally avoid asking clients what they want because often they don't really know, and we might end up trying to meet the wrong requirements. Instead, I describe outcomes, rely on existing examples, and use iterative development techniques to produce proofs-of-concept that serve as conversation starters.

TAKE Note

IT Leadership Talent Study

PARTICIPATE The lack of leadership-team talent is one of the biggest obstacles keeping IT from becoming as valuable to the company as possible, according to CIOs in our Executive Council. When you're thinking about cultivating leaders, what are the biggest talent gaps you see? What skills do you consider indispensable? Most importantly, what development techniques and programs work best for endowing your senior IT managers with critical leadership capabilities? You can help us answer those questions by completing our short survey. In return, we'll send you the peer benchmark and best-practice results we collect in the next 30 days. <http://surveymonkey.com/s/cectalent>

Engage Youth in IT

DOWNLOAD This 4-minute video highlights young professionals who are passionate about their life-changing IT careers at Vail Resorts. It showcases how employees in the company's recreation and hospitality businesses have fun, including at their jobs. Produced by Vail Resorts in cooperation with the CIO Executive Council, the video is freely available to business professionals and educators who want to help get young people interested in IT careers. We encourage people to use the video to demonstrate the world of possibilities that IT can open up for today's youth. council.cio.com/VID113

Become a Game-Changer

DOWNLOAD Data from the State of the CIO 2013 survey reveals that more and more IT leaders are primarily business strategists and game changers while fewer and fewer are mainly function heads and service providers. In fact, the number of function-head CIOs has reached its lowest level since we began measuring in 2008. Learn what distinguishes the types and how their priorities and initiatives continue to diverge in this exclusive CIO Executive Council Future-State CIO progress report. council.cio.com/programs/FS2013



Breaking the Paradox

This final CIO Paradox column reflects on three of the biggest contradictions that leaders in the role face **BY MARTHA HELLER**

I first introduced the CIO Paradox to readers in December 2009, and I published a book on it in October. I'm ready finally to lay the CIO Paradox to rest. (But don't start missing me yet, readers. I will be back in these pages very soon with something new.)

Since this column amounts to my CIO Paradox swan song, I would like to reflect on three of the more pernicious contradictions of the CIO role.

1. The Futurist vs. Archivist Paradox

As CIO, you are responsible for the future of your business in the age of consumerization. But you are also an archivist, who drags with you the technology decisions your company made 15 years ago. What do you do?

Learn to sell the foundation. Whether you use metaphors, data or images of burning platforms, you need to sell the unsexy side of IT. This has always been a challenge for CIOs, but with your business peers hungry for apps, products and devices, the skill is a must-have.

Simplify. As Geir Ramleth, CIO of Bechtel, says, "In IT, we always come up with complexities and barriers for what we want to do, and we overlook the simplest solution." Ramleth uses the equation Speed = Innovation × Simplicity to communicate that the simpler the organization, the greater its ability to drive change.

Manage business intersections. Today, it's easy for your business peers to buy their own technology. The tighter your connection to these peers, the better. The people who straddle the business-IT line will determine your success. Be sure you have the right people in those roles.

2. The Accountability vs. Ownership Paradox

CIOs proudly proclaim, "In my company, there are no IT projects, only business projects." But when the project is done and someone isn't happy, fingers usually point at the CIO. A committee may agree on the investment, but business leaders don't always sustain their participation

through the whole project. As one CIO said, getting business partners engaged in an IT project is like pushing a rope.

So how do you work your way out of this Scylla and Charybdis of IT leadership?

Assess your business sponsors. Do all your IT initiatives have business leaders? Do those sponsors have the credibility to lead? If you are the de facto sponsor, you are not in a good place. Engage a business leader and share the baton.

Cultivate patience. Everyone has a bias for action. But you cannot start a project until a business leader steps up to the plate. One of the most difficult skills to cultivate is the ability to balance the need for speed with the chutzpah to tell your business partners to cool their jets.

The CIO role is so rife with contradictions that it's hard to imagine how anyone could be successful in it—yet many are.

3. The Successor Paradox

CIOs know they must develop a successor, but few CEOs honor their choice. This paradox is really about the skills you need to cultivate in your senior team. As a recruiter, I can tell you that the demand for "blended executives"—those who have technology, business and

relationship-building skills—exceeds the supply. If you do not grow your own, you will lose the war on talent that has snuck up on us again.

Rotate staff. Don't wait for HR to build a leadership-development program. Draft a contract with your business peers to exchange some key leaders for a defined period of time. You're an officer of the company. Do it yourself!

The CIO role is rife with so many contradictions that I cannot imagine how anyone could ever be successful in it. And yet, I meet successful CIOs every day. If you can make the role work, you will have a command of business, technology, customers, markets and even human behavior that is beyond the scope of any other executive. Break the paradox and get ready for greatness.

Martha Heller is president of executive recruiting firm Heller Search Associates and author of *The CIO Paradox*. Follow her on Twitter: twitter.com/marthaheller.

Collaboration Leaders

First Data leverages IT staff who focus on teamwork and corporate goals

BY KEVIN KERN

The world of online payments is changing dramatically, and my team is on the front lines of customer service. Accordingly, as a leader at First Data, I need people on my team who are dedicated to transforming the organization.

Within Global Operations and Technology, we have established seven goals that guide us, including providing differentiated customer service and enabling and accelerating revenue growth. This leads to both internally and externally focused transformation initiatives. We dedicated considerable resources to creating global sourcing capabilities in-house, which has saved more than \$200 million over the last three years. Establishing a global development governance process now ensures that we are making and deploying improvements for our customers without disrupting their retail cycles.

But the goal I usually start with—the one that makes it possible for us to deliver on all the others—is building and leveraging global talent. Obviously, this starts at the top. I came to First Data almost four years ago because I like leading global, complex transformation; I've been doing it for more than 12 years. A number of people who have been with me through those years came along. All my direct reports have been CIOs in their careers, which helps create confidence and trust in my team among my C-level peers.

My direct reports are nothing if they don't have people with the skills and mind-sets to support them. We seek to hire, mentor and promote people with certain qualities, such as a collaborative focus, intelligence and global experience. Some people may seem overqualified, but that's OK. The culture here has been risk-averse, and we need to change that. Everyone on the team has to have the mind-set that they're going to step out, and they need to

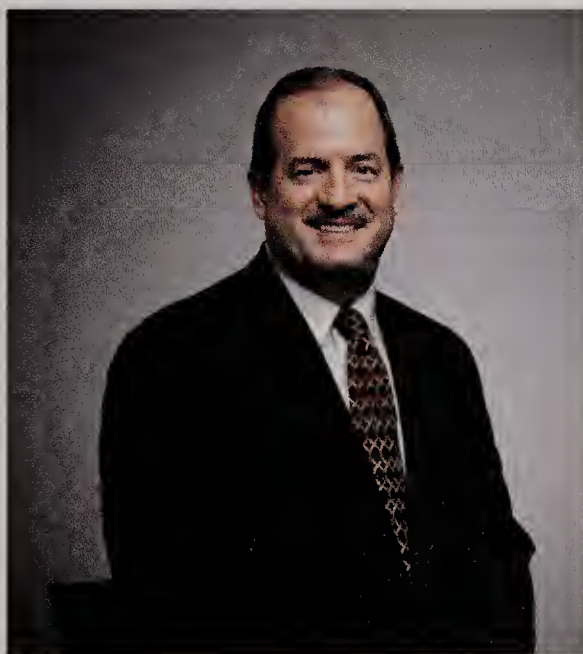
know that I'll support them as their leader.

Another big part of how we work is our matrixed structure. I've found that A and B-plus players are very comfortable in a matrix. They've had some successes and failures, and they understand the difference. They also understand that while they've got to be aggressive, we're asking them to operate in a manner that's respectful and collaborative. They are judged in their formal reviews on whether they've

built consensus and constituency within the management team to earn the possibility of a promotion. Conversely, I've seen B and C players struggle in this environment. They tend to want to keep knowledge to themselves; they see it as power. When you're transforming, you can't have people in that mind-set. We need people who will step up when we ask them to take on a goal that's outside their wheelhouse, for the good of the company.

I've also learned that you have to take risks sometimes. When people leave the company, it opens up opportunities

for people who might not seem perfect for a role, but who have the ability to scale. Our annual talent review process includes an assessment of whether people are willing to move around the company or to other global sites, and making those moves within a collaborative IT organization is paying off for the whole company.



Kevin Kern is executive vice president and CTO of global operations and technology at First Data, and a member of the CIO Executive Council.

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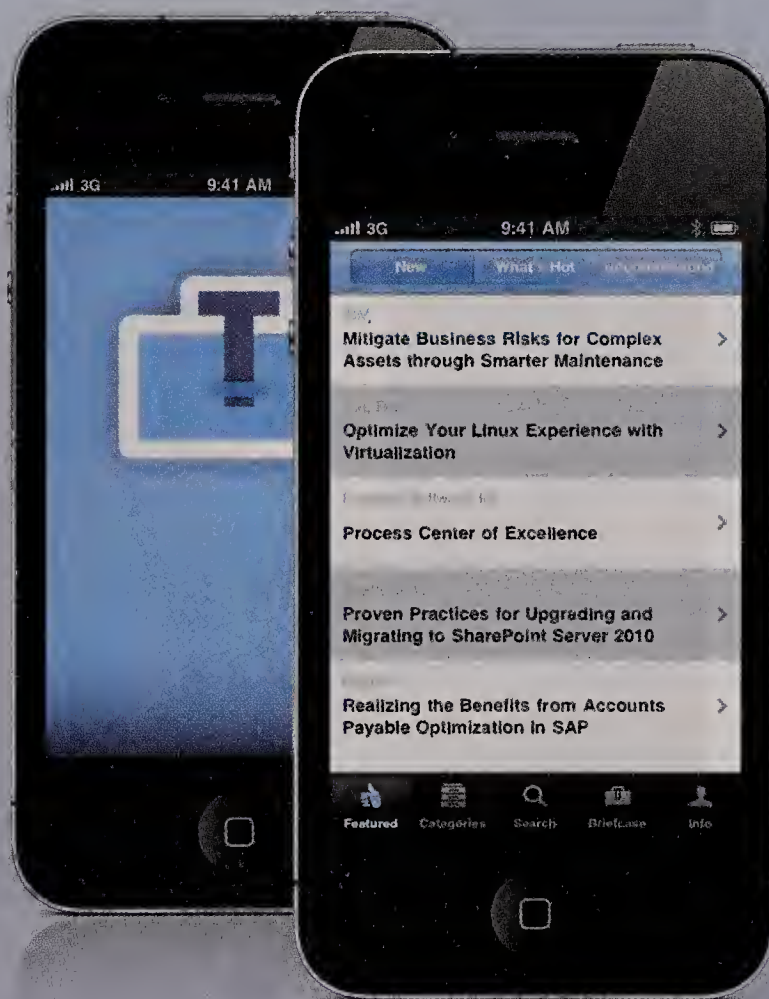
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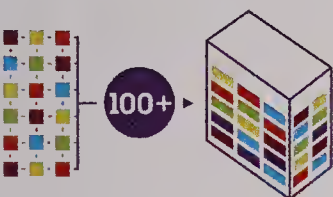
The 9/11 Memorial site in New York City honors the men, women and children killed in the terrorist attacks of September 11, 2001, and the World Trade Center bombing of 1993. Visitors can stand where the twin towers fell, view the memorial pools, and read panels listing victims' names. Because there were nearly 3,000 victims, "we recognized that we needed an easy way to find a name," says Sean Anderson, CTO of the National September 11 Memorial and Museum. So the organization developed a mobile app, the 9/11 Memorial Guide, that helps visitors quickly find individual names and allows them to view victims' photos and bios. Another app, Explore 9/11, provides a seven-stop walking tour of the memorial that follows a time line of 9/11 events. The site is open to visitors 24 hours a day, every day, so the IT infrastructure supporting the apps, website and ticketing system must work flawlessly, Anderson says. The apps have been downloaded 1.2 million times and the website gets about 1 million visitors per month.

—Lauren Brousell

INTRODUCING A SYSTEM

Now more than ever, data and analytics are transforming the way companies do business. This transformation brings with it tremendous opportunity and creates quite a few headaches for the IT department.

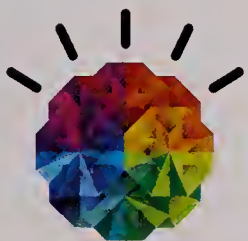
The problem is in the nature of big data itself. It's growing in volume and constantly changing, and the rigid, custom data services that companies traditionally built just can't keep up.



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THAT ADAPTS TO THE DATA.

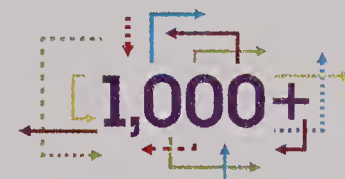
design for today's high-performance data workloads. Its deep analytics model, for example, runs analytics queries up to 100 times faster than traditional custom data warehouse systems.²

DATA MANAGEMENT AND ANALYSIS MADE SIMPLE

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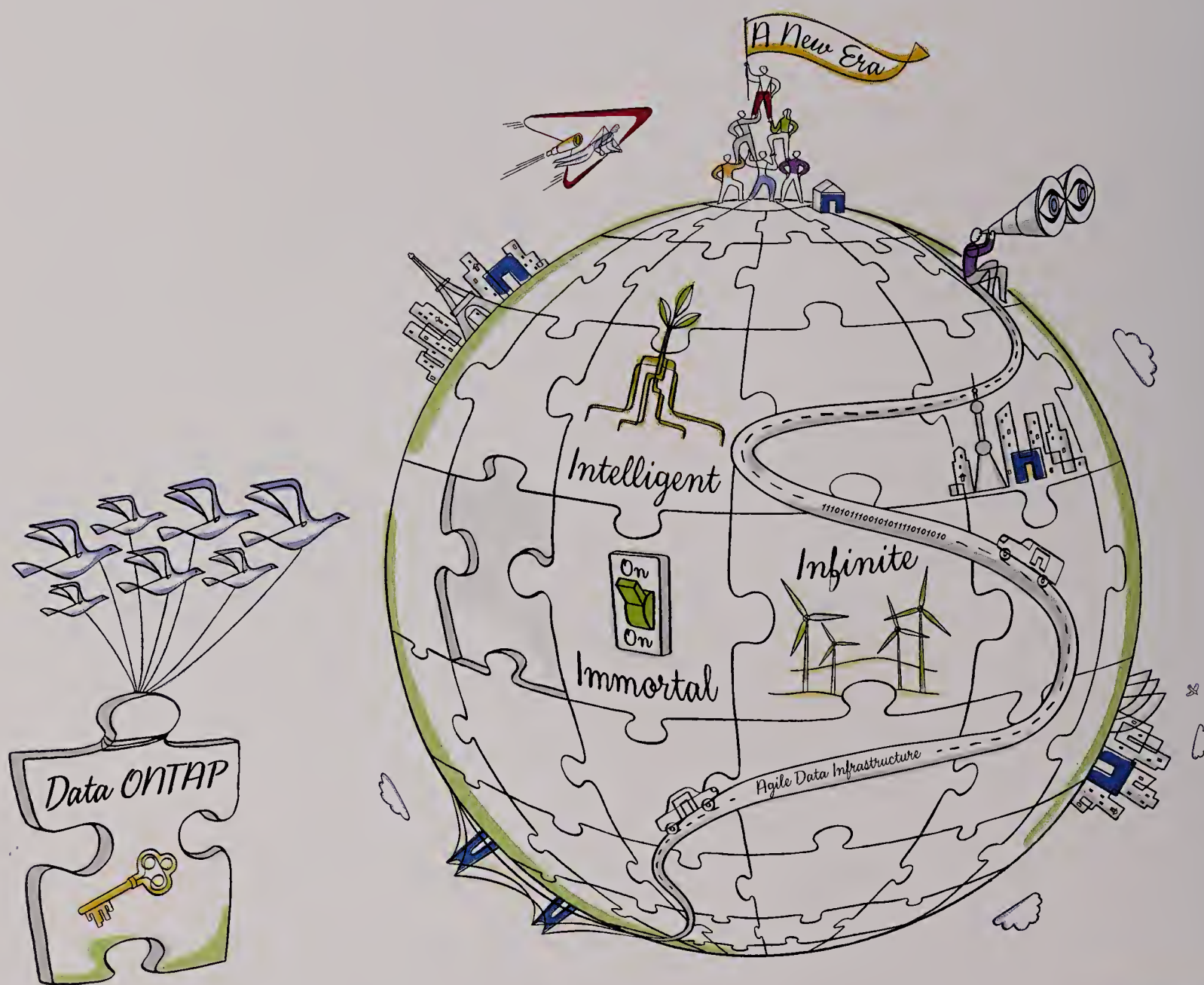
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